

No. 851,225.

PATENTED APR. 23, 1907.

J. F. DONOHUE.
PICKING CAM FOR LOOMS.
APPLICATION FILED SEPT. 25, 1905.

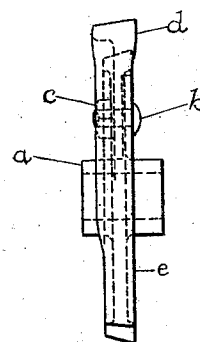
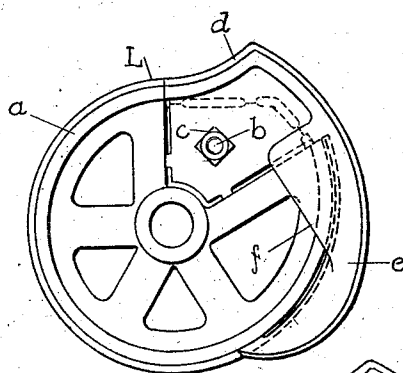
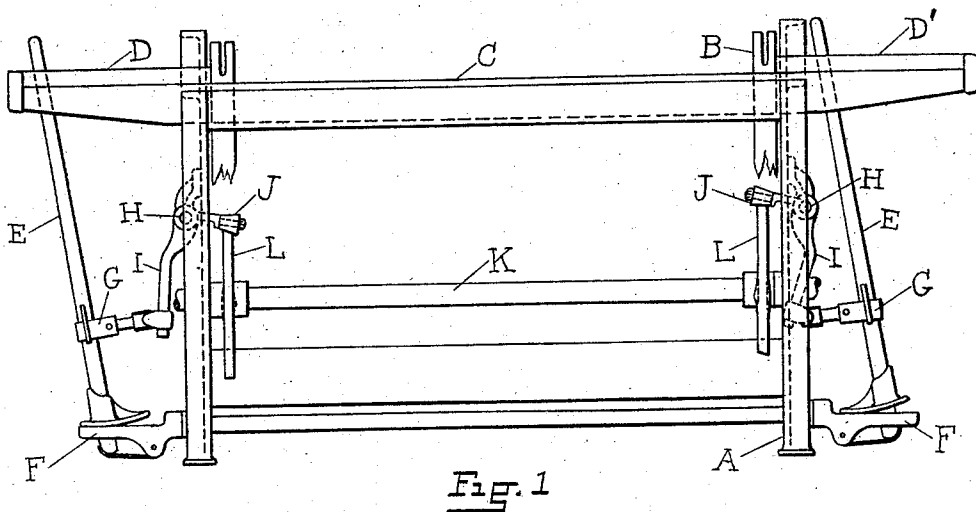


Fig. 2

Fig. 3

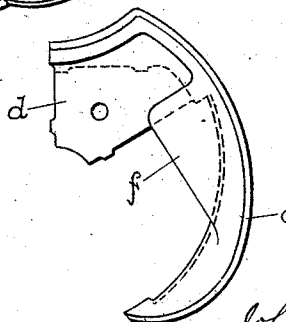


Fig. 4

WITNESSES

John F. Cavanagh
Joseph A. Benoit.

INVENTOR

John F. Donohue
By Horatio E. Pillsbury
Attor

UNITED STATES PATENT OFFICE.

JOHN F. DONOHUE, OF PAWTUCKET, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO JAMES EASTHAM, OF CUMBERLAND, RHODE ISLAND.

PICKING-CAM FOR LOOMS.

No. 851,225.

Specification of Letters Patent.

Patented April 23, 1907.

Application filed September 25, 1905. Serial No. 280,103.

To all whom it may concern:

Be it known that I, JOHN F. DONOHUE, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Picking-Cams for Looms, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in cotton looms and has for its primary purpose a means for guarding against the accidental insertion of the shuttle in the wrong box.

Through inattention or other inadvertence the operator, in replacing a shuttle, will occasionally return the shuttle to the opposite box, and thereby create what is styled a "smash." Occasionally, also, the shuttle will, through imperfection, in the throw, rest in the mouth of the shuttle-box.

The above disadvantages are obviated by my invention which consists in creating a dwell of the picker-sticks upon their inward throw or reciprocation. This is attained by means of a novel cam structure which is hereinafter set forth, and illustrated in the accompanying drawings wherein,

Figure 1 is a front view of a loom equipped with my invention. Fig. 2, a side elevation of the picker-cam. Fig. 3, an edge elevation of the same, and Fig. 4, a side elevation of the toe and its extension.

Like reference characters indicate like parts throughout the views.

My invention is illustrated as embodied in an ordinary cotton loom comprising the usual stand or frame A, sword B, lay C, shuttle boxes D, pick sticks E, parallel motions F, straps or connectors G, pick shafts H, arms I, and pick balls, J.

D' is the single box in which the shuttle is inserted.

Mounted upon the cam shaft K in the usual manner are the pick cams L. In detail these cams comprise a cam disk or body, a, to which is fixed by a bolt, b, and nut c, a toe d provided with a cam shaped extension or beak, e, having upon one side a web f. The beak, e, rests upon and overlaps the portion of the cam periphery adjacent the toe, d.

The cam has its beak e extended through an arc of more than 90 degrees and when the picker-stick of the box D' is in the position in which it is shown in the drawing, where it is held by the picker cam beak e, the operator

cannot insert a shuttle, and this condition remains until the opposite shuttle box has made its change. This avoids the possibility of placing the shuttle in the single box at the wrong time, that is, the instant when the opposite shuttle boxes are "on the change." This avoids the smash and damage caused by two shuttles meeting on the same level. The picker-stick is oscillated by the action of the cams L through the pick balls J and the arms I. The beak e of each cam serves to retain its connected picker-stick temporarily at its extreme inward throw during more than a quarter of the revolution of the cam shaft K, thereby presenting an impediment to the insertion of a shuttle in the box and insuring the final removal of the shuttle should the latter have not responded to the original blow of the picker-stick.

Having described my invention what I claim is,

1. In a loom, a cam comprising a cam body with portion removed, a toe having a portion to fill the space left by the removed portion of said body and a cam shaped beak and a web, said beak resting upon and overlapping the portion of the cam body at its periphery adjacent the toe, and means securing the toe to said body.

2. In a loom, the combination with the pick stick, pick ball and their connections, of a cam shaft, a pick cam upon the shaft, a toe upon the cam having a web overlapping the side of the cam and a cam beak upon the toe and extended for more than 90 degrees beyond and around the cam periphery and adapted to coact with the pick ball to retain the pick stick at the extreme of its throw.

3. In a loom, a cam disk, and a detachable toe secured thereto and having a cam shaped beak extending for more than ninety degrees around said cam disk and merging into the periphery of said disk for intermittent contact with picker-stick operating means to present an impediment to the insertion of a shuttle in the shuttle box and a web intermediate the toe and beak and overlying the cam upon one side thereof.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN F. DONOHUE.

Witnesses:

JAMES EASTHAM,
DAVID W. COLLINS.